# INFORMATION TECHNOLOGY SERVICES

# IN SAN FRANCISCO GOVERNMENT

Prepared by

San Francisco Civil Grand Jury

1995-96



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## INTRODUCTION

Located just 40 miles north of Silicon Valley, the City and County of San Francisco is well positioned to take full advantage of the information age. However, the City and County, in pursuit of conducting the business of government, has been unable to achieve many of its objectives in the area of information technology. These deficiencies are due to the following factors: lack of political leadership; ineffective planning; poor inter-departmental communication; short-term budgeting; inadequate personnel management; and inter-departmental competition for precious technology resources. The rapid pace of change in information technology, coupled with the problems identified above, require a rethinking of how San Francisco manages its information technology infrastructure.

The 1995-96 San Francisco Civil Grand Jury embarked on an ambitious investigation into the utilization and management of information technology services within city government. The Civil Grand Jury arrived at 15 findings and 14 recommendations pertaining to this topic. The report is divided into the following sections: Citywide Issues, City Controller, Training, Information Services Division (ISD), Department of Human Resources (DHR), and Public Access Issues. In addition, two appendices provide additional data that guided the work of the Civil Grand Jury.

## CITYWIDE ISSUES

### Summary

There is an absolute necessity for a comprehensive Strategic Plan coupled with a Business Plan recognizing fundamental needs in the area of information technology in San Francisco. These plans are needed at both citywide and department levels and are essential to the growth of our City into the 21st Century. Formulating of multi-year budgets, setting of technical personnel

standards, enabling enhanced procurement time consistent with the fast-paced nature of this field, coordinating and linking programs, multi-departmental development and training -- all point to having a central city department and a department head with sufficient authority and leadership to direct San Francisco's critical technology agenda, as well as serving in an advocacy role to the Mayor, the Board of Supervisors and the citizenry.

The current dispersion of functions among the Chief Administrative Officer (CAO), the Controller, the Electronic Information Processing Steering Committee (EIPSC), the Information Services Division (ISD), and the Department of Electricity and Telecommunications (DET), is an invitation to mediocrity, at best, but most likely devolves into a communications Tower of Babel. It is a situation wherein the City is attempting to create and maintain a vast technology with no one effectively in charge.

A common feature of modern municipal government, less so in private enterprise, are bureaucratic impediments that stymie timely and effective action. Although this "fact of life" can be accommodated in most administrative endeavors, the rapid advance of information technology threatens to far outpace our efforts.

**Background**

Interviews with City Officials, Department Heads and Information Services personnel, as well as attendance at focus groups conducted by KPMG-Peat Marwick, reveal that there is a definite need for direction at the highest level regarding the entire range of information technology.

EIPSC and ISD, formerly under the Chief Administrative Officer (CAO), are now both placed under the City Controller, while DET remains under the CAO -- an office which will no longer exist after June 1996. The duties, responsibilities, authority and scope of EIPSC and ISD have been muddled since their inception. Their interface and division of responsibility for planning with DET are loosely defined. San Francisco has reacted to the rapid onslaught of new technology in

much the same manner as most, if not all, governmental bodies -- with incrementalism and devolution of authority.

The Civil Grand Jury's Survey (see Appendix A) documents inequality in the availability of technology resources within city departments -- from a highly sophisticated new Main Library, to a near total absence of technology in most smaller departments. This is grossly apparent in budgets, hardware and software inventories, trained personnel, access to training programs, and informed leadership.

**Findings**

- There is a grievous lack of interface and coordination within groups of departments which must function collectively. [1] Sharing of technological resources among affinity departments should be coordinated from a central authority.

- DET is responsible for the teleconnectivity of our government buildings. However DET does not have responsibility for data transmission hardware and software which must be accommodated by this infrastructure. DET has only minimal coordination with EIPSC and ISD. The separation of voice and data communication is inexcusable in today's networked environment.

- EIPSC has failed in its mission to craft a citywide master plan for information technology; failed to provide leadership to advance a citywide agenda for technology; and failed to adequately address the needs of smaller city departments. The weaknesses of EIPSC have

[1] Emergency Services [Police, Fire, Office of Emergency Services, Paramedics], Revenue [Controller, Assessor, Recorder, Planning], Education [Board of Education, Library, CCSF, Fine Arts Museums], Public Health Department and Department of Social Services, Law Enforcement [District Attorney, Public Defender, Police, Sheriff, Juvenile Probation, Courts], etc.

likewise been identified in the KPGM-Peat Marwick "Strategic Plan for Information Technology" (1996), a consultant's report crafting a roadmap for future direction of the city's information technology systems and services.

**Recommendations**

1. A new position of Chief Information Officer (CIO) should be created to provide strategic planning and leadership for information technology as it pertains to conducting the city's business. This executive level position should be appointed by the Mayor and confirmed by a majority vote of the Board of Supervisors. A candidate for this position must possess relevant training and expertise. The CIO should serve at the pleasure of the Mayor.

2. The CIO should serve as the Department Head of a new Department of Information Technology (DIT). Those functions now assigned to the Department of Electricity and Telecommunications (DET), the Electronic Information Processing Steering Committee (EIPSC), and the Information Services Division (ISD) would be transferred to DIT.

3. As an initial project, DIT should have an information management audit conducted of all city departments to determine needs for citywide planning and budgeting as related to information technology goals.

## CITY CONTROLLER

**Summary**

In order to assess the next direction for technology in city government, better accounting and inventory must be prepared for strategic decision making. The City Controller, as the city's chief fiscal officer and auditor, does not currently maintain adequate records or budget information concerning city computer assets. Historically, the City Controller has relied on EIPSC's three-

year master plan documents to serve as a register of departmental ownership of computer equipment and software. However, this component of the master plans has not been maintained, nor required, for several years. The inability of the city to collect an inventory of what computer assets it owns is a serious problem. Without such an inventory, the city cannot know if theft occurs or how to plan for upgrading equipment.

The city's annual budget request process does not adequately address how much is spent on computer technology. The City Controller is unable to determine how much of the General Fund is appropriated to computer technology due to inadequate accounting procedures.

**Background**

Certainly the first step in understanding what San Francisco needs is to fully understand what the city already owns. When asked by the Civil Grand Jury, "How many PCs are owned by the City and County?" no city official could answer this basic query. Considering that any item requisitioned by a city employee is assigned a property inventory control number, and must be drawn from a specified city fund, it is logical to assume that a master inventory should exist.

Total city spending on information technology, likewise, is a mystery. During the mid-1980s, a study prepared for the Mayor's Fiscal Advisory Committee indicated that $60-90 million was spent on technology annually. Interviews with key city officials revealed estimates that this amount is now closer to $120 million. This information is in agreement with the Civil Grand Jury's Survey (see Appendix A) which estimated city spending at about $100 million per year. When asked by the Civil Grand Jury, the Controller was unable to provide an estimate of technology expenditures stating that departments do not follow standard budget accounting when it comes to purchasing computer equipment or services.

The lack of accounting controls and inventory of city-owned and leased computer equipment is very disturbing. A citywide system of uniform nomenclature for computer procurement and a

register of assets is needed.

**Findings**

- Neither EIPSC, ISD nor the Controller knows how many computers are owned by the City. Relying on the three-year master plans for departmental inventories has failed to result in a citywide inventory of computer assets.

- There is no uniform vocabulary and there are no unified accounting methods to track the acquisition of computer equipment and services within the budget process.

**Recommendations**

4. The Controller should develop an inventory of all city-owned and leased computer assets. This inventory, once created, should be annually updated and incorporated as part of the annual budget request process.

5. The Controller should standardize the nomenclature of computer assets and develop better accounting practices for citywide technology expenditures.

**TRAINING**

**Summary**

Technology and training have become vitally linked in today's competitive workplace. Rapid change in technology demands that city information technology personnel have access to state-of-the-art training. City funds for computer training are scarce and in decline; yet demands for more training grow with new advances in emerging technology. Creative solutions to fund training must be sought.

**Background**

The rapid pace of technological change brings training to the forefront. The Civil Grand Jury's Survey (see Appendix A) paints an uneven portrait of the "state of training" within city departments. According to our survey, for example, 36% reported no formal training opportunities for their computer staff. This bleak assessment stems from the low priority placed on technology training by departments and from the vulnerability of training funds during the Mayor's budget review process. In essence, training is seen as a "luxury" item during tough budget negotiations.

ISD offers an impressive catalog of technology training opportunities. However, smaller departments cannot afford to send their staff to even city subsidized training events offered by ISD. Thus, some smaller departments receive no training unless the employee is willing to absorb the cost without reimbursement. The ISD Training Center is unable to recover the costs of providing these services without charge-back fees. Even if money were not an issue, ISD does not have sufficient in-house trainers to meet the city's actual demand for computer learning.

**Findings**

- Funds for computer training opportunities are meager and vulnerable to budget cuts.
- According to the Civil Grand Jury Survey (See Appendix A), vendors are already supplying training equal to ISD-sponsored training opportunities.

**Recommendation**

6. The City Purchaser, in cooperation with EIPSC, should require a training set-aside component as part of the computer procurement bidding process.

## INFORMATION SERVICES DIVISION (ISD)

### Summary

ISD is a relatively strong performing department. However, the Civil Grand Jury's investigation did reveal specific operational weaknesses. Interviews with city officials, our questionnaire results from city Management Information Systems (MIS) departments, site visits to the Data Center, documents gathered from ISD, and our research comparing other California cities and counties (see Appendix B) pointed us to the following areas of needed improvement: ISD, as a charge-back enterprise, does not support all city departments equally. Rather, ISD provides fee-for-service support for city departments with resources, often neglecting smaller departments. ISD needs to develop a wider vision and to look ahead. Exciting improvements in data networking permit the creation of a citywide relational database, commonly referred to as "data warehousing." ISD should take the leadership in advancing a shared citywide network.

### Background

ISD serves as the major provider of data processing and information services for the City and County. The Division consists of 180 information technology professionals and has an annual budget of $20 million. ISD is funded by charging back city departments for information technology services, and it currently reports to the City Controller.

ISD tries to be very customer-service driven. To accomplish this, ISD assigns staff to be liaisons to city departments, convenes annual department-head level meetings, offers popular training programs, and provides consulting services for a reasonable fee. In all these informal activities, ISD is very eager to ascertain overall satisfaction. However, in terms of formal service agreements, ISD is less eager. It is essential that ISD develop more formal channels when fulfilling the data processing needs of city departments. This would involve service-level agreements signed by both ISD and their clients. With such service-level agreements, city

departments would be assured of reduced risk and greater satisfaction with ISD products and services.

Quality Assurance (QA) is crucial to the professional functioning of information technology. By definition, QA involves policies, procedures and controls to ensure error-free data processing. ISD, as the leading city technology department, has been slow to adopt standard QA guidelines for its mainframe operations. This is very disturbing and demands swift attention.

ISD has been unable to serve the needs of smaller departments effectively. Smaller departments are unable to afford ISD services. This situation has created a dichotomy in city government. Smaller city departments, largely dependent on the General Fund, are technology-poor, while larger city departments, less dependent on the General Fund, are technology-affluent. ISD gravitates toward serving the needs of departments that can pay for their services. Thus, smaller city departments are often left to fend for themselves.

The need for creating a data warehouse for city government is becoming imperative. The inter-departmental sharing of information is critical among cross-functional departments. The networking of various city departments will ease the sharing of data and reduce the necessity of multiple points of data collection. For example, the Fire Department needs to know from the Assessor who owns a particular property in the event of an emergency. ISD should consider creating a team to study the feasibility of establishing a data warehouse. The data warehouse concept would pull a variety of city-owned data from defined sources and integrate the data so that the information is no longer simply operational but strategic information.

**Findings**

- The Civil Grand Jury Survey (see Appendix A) found that 73% of respondents had not used service-level agreements in their dealings with ISD.

- The Civil Grand Jury Survey (see Appendix A) revealed the following: Only half of the respondents used some kind of Quality Assurance process. ISD has adequately documented the Change Control Management Process describing how changes are introduced to the computer production environment.The Source Material Migration Process (ISD Quality Assurance documentation) was found to be incomplete as of March 1996. The Job Control Language Migration Procedures and Control Card Migrations were missing from the city's mainframe operations manual.

- ISD has been ineffective in transferring technology to smaller city departments. Comments solicited by the Civil Grand Jury Survey document the woes confronting smaller city departments that must operate without new technology and without the expertise of ISD due to budgetary constraints.

**Recommendations**

7. ISD should operate, using standard service-level agreements, so as to ensure customer satisfaction and better accountability.

8. ISD, whose role it is to advance information technology, should make one of its main priorities the promotion of improved Quality Assurance standards, both within ISD operations and citywide.

9. ISD should develop better strategies to assist smaller city departments in their acquisition and use of appropriate technology. In order to achieve this objective, ISD should conduct a needs assessment within these smaller city departments to determine their budgetary and personnel issues pertaining to technology.

## DEPARTMENT OF HUMAN RESOURCES

### Summary

During July 1996, the Department of Human Resources is scheduled to implement a new pilot classification structure for information systems (IS) personnel. It is important that this reclassification project's first-year implementation have oversight. Additionally, there is a need to account for personnel time devoted to information technology projects and a need for new procedures to share IS positions among smaller city departments. Anything less will perpetuate a flawed personnel system that does not serve the technology needs of San Francisco government

The current civil service pay structure for IS positions exists in an environment of departmental parochialism. It is common practice for departments to focus on their perceived uniqueness in terms of staffing, rather than on the greater needs of the city. The concept of a "citywide employee" does not seem to exist in the organizational practices of city managers. Departments with alternative sources of revenue expand autonomously while smaller departments, dependent on the General Fund, are left with minimal resources with which to update their IS capabilities.

### Background

The proposed reclassification system for information systems (IS) personnel is based on a protracted study that has been in progress for at least six years. According to the Civil Grand Jury Survey, this delay has directly affected over 625 FTE (full-time equivalent) employees accounting for $35 million in annual payroll.

Traditionally, class and pay have been perceived as indicators of the degree to which an employee is valued. Fortunately, the new IS reclassification scheme puts into practice a compensation plan that is internally equitable and competitive in the marketplace for computer expertise in the Bay Area.

Although there is no Business Plan for the City and County, nor are there such plans for individual city departments, the reclassification project is based on what is considered validated data. Additionally, the reclassification project must negotiate through the collective bargaining environment. It is envisioned that the new classifications for IS employees will achieve the objective of reducing the number of classes by a third, bringing greater flexibility and advancement to the workforce. Implementation is scheduled for July 1996. The Department of Human Resources intends to use this reclassification project as a prototype for future contract negotiations for other classes and as part of a wider effort in civil service reform.

The allocation of IS personnel within various city departments is largely dependent on administrative discretion over funding sources. Smaller city departments are most likely to have limited staffing authority and less likely to have IS positions. There is no effective advocacy for bringing much needed technology resources to smaller departments.

**Findings**

- The proposed reclassification of IS personnel is a novel, pilot project. The success or failure of this personnel management effort will determine the future reclassification of other city personnel contracts.

- The Civil Grand Jury survey (see Appendix A) reveals a few disturbing results:
  - 35% reported no specific written job classifications;
  - 48% reported no job performance criteria;
  - 40% reported no specific written job descriptions;
  - 57% reported no tracking of hours spent on IS projects.

- Many smaller city departments, particularly those totally dependent on the General Fund, have no information technology personnel on staff. The Civil Grand Jury Survey (see Appendix A) collected comments from smaller city departments that indicate an imperative

need for rethinking how the city allocates computer staffing.

**Recommendations**

10. The Department of Human Resources should monitor the first-year implementation of the new information systems reclassification series and report to the Mayor and Board of Supervisors on its progress by October 1, 1997.

11. The Department of Human Resources should develop a citywide tracking and accounting system for personnel hours spent on projects by classified information systems personnel.

12. The Department of Human Resources should develop procedures for the sharing of classified information systems personnel among smaller city departments.

## PUBLIC ACCESS ISSUES

**Summary**

The City and County is moving incrementally towards building a "virtual city government". However, this effort will not succeed without more attention being given to wider access to electronic mail (e-mail) and the Internet by the entire city workforce. For example, the Mayor's Office and the Board of Supervisors do not have access to either of these basic technological tools. ISD should expand the city's World Wide Website to include more useful and complete city information. The city's website should also be improved to allow for greater citizen involvement by adding interactive features that support and encourage participation.

Demands for electronic city-owned data by commercial ventures should not be ignored. City policies should be crafted balancing the Sunshine Ordinance with the possible commercialization

of city-owned data, as appropriate. Revenue raised by marketing value-added city-owned data can supplement the General Fund.

**Background**

For decades, information technology has not received high priority attention in the City and County. San Francisco, for example, operates without a current citywide master plan for information technology, despite such a mandate required of EIPSC. Cumbersome decision-making processes and lack of vision, not to mention a lack of resources, have kept the City and County from implementing technological solutions which could save millions of public dollars, substantially increase levels of service, and open access to City Hall. The City and County has no central database to identify the resources that it provides. Accordingly, City and County employees often do not know where to send a constituent in need of service. Delivery of service and information would be improved if San Francisco were to work towards a "single point" customer service philosophy. With accurate, centralized, automated information, both city employees and the citizenry would benefit.

The trend toward computerized local government information creates new challenges and opportunities. Electronic public access can be provided at multiple access levels, both free basic service, and supplementary or enhanced services that are paid for by user fees.

Bringing city government as close to the people as possible is now within reach. Emerging new technologies, such as electronic mail (e-mail) and the Internet (World Wide Web), open new channels for citizen contact with City Hall. San Franciscans can now point and click on a personal computer to find city information or send a message to an elected official.

The San Francisco City Homepage on the World Wide Web (WWW), conceived and managed by ISD, is a good beginning. However, ISD needs to create a city homepage that provides more useful and complete information enhanced with interactive capabilities. The city's website is still

in its infancy. However, the website does not provide the most basic information such as a directory of city services. Likewise, the city's official website cannot connect a citizen to essential offices such as the Board of Supervisors or the Mayor's Office. ISD should set as a goal to create a "virtual City Hall" complete with a comprehensive guide to city services and the ability for transmitting messages from citizens to appropriate city officials. Such enhancements to the San Francisco official website will both empower city employees to solve public problems with greater efficiency and create new avenues for citizen involvement in municipal affairs. For example, an interactive website would allow San Franciscans the opportunity to forward ideas or suggestions on how to reduce costs and increase efficiency in our city government. Likewise, the Civil Grand Jury could solicit suggestions and complaints for potential investigation.

San Francisco has not kept pace with commercial demands for city-owned data and data access. As more and more local information becomes computerized, the costs of providing access to automated data escalate. Various business enterprises are eager to obtain electronic local information for commercial purposes. At present, the City and County does not operate with a clear policy regarding city information as a commodity. Balancing the public's access to tax-supported information against commercial demands for the same information is mired in controversy. City officials should consider crafting a reasonable pricing policy for the delivery of value-added information products and services. Enhanced data are developed explicitly for market use and can be sold at fair market value bringing revenue to the city.

New York City, for example, is currently investigating the appraisal and marketing of data which reside in its electronic databases. During January 1996, New York City issued a "Request for Information" to solicit a private sector partner to help market enhanced city data at market rates. Local governments from around the country will be carefully monitoring New York's experiment in data commercialization. To reduce information technology cost and risk, San Francisco should collaborate with appropriate private sector information industries to identify opportunities for joint development and use. Revenue raised from the retailing of city-owned data could supplement the General Fund or be earmarked for technology reinvestment.

**Findings**

- City departments do not have adequate access to electronic mail or the Internet. According to the Civil Grand Jury Survey (see Appendix A):
  - 28% reported no access to e-mail;
  - 36% reported no access to the Internet.

- The City does not have in place a policy for the commercialization of city-owned data. The current Administrative Code does accommodate the selling of market enhanced city data. While taking into consideration all aspects of the San Francisco Sunshine Ordinance, the city can explore the formation of commercial ventures in marketing its electronic information. Escalating costs and demands for city-owned data will be problematic until these issues are addressed.

**Recommendations**

13. The City and County should make optimal use of e-mail and the Internet to foster interactive communications between the citizens and their government.

14. The City and County, in consultation with the San Francisco Sunshine Ordinance Task Force, should investigate the retailing of city-owned data products and services in support of the General Fund.

**Responses Required**

Mayor

Board of Supervisors

Chief Administrative Officer

Controller

Electronic Information Processing Steering Committee

Information Services Division

Department of Electricity and Telecommunications

Department of Human Resources

**APPENDIX A**

April 1996

**ELECTRONIC INFORMATION PROCESSING QUESTIONNAIRE**

Assisted by

Coro Foundation Fellows

In order to enhance their investigation of information technology in city government, the San Francisco Civil Grand Jury conducted a confidential survey through a questionnaire sent to all city MIS departments. It was the intent of the Civil Grand Jury to collect definitive data pertaining to computing and technology across the entire city bureaucracy. The *summary total results* of this survey are presented below. The information gathered from the survey aided the Civil Grand Jury's investigation and resultant recommendations regarding information technology in the City and County.

The questionnaire consisted of 43 items (40 close-ended and 3 open-ended). The questionnaire was mailed to 55 city MIS department managers during December 1995. The Civil Grand Jury received 48 completed questionnaires, a remarkable response rate of 87%. The sampling frame included all MIS departmental contacts as maintained by EIPSC.

In the cases where total responses are in excess of 100%, that is due to the possibility of more than one response being applicable from a single department. Whereas, in the cases where total responses are less than 100% , that is due to failure of a department to respond to a particular query.

## *SURVEY RESULTS*

1. How many electronic information processing (EIP) staff are in your department?

   625 Number of Staff

2. What is the computer environment of your department?

   35% Mainframe
   46% Mid-Range (e.g., WANG)
   44% Micro
   73% Server-Based LAN
   35% Client Server
   15% Non-Server-Based LAN
   42% Stand Alone

3. What technologies do you use?

   85% Data Communications
   61% Voice Communications
   17% Radio Communications
   10% Microwave

4. Rate your department's proficiency with the following technologies:
   (Scale: 5=Very Proficient, 1=Not Proficient, 0=Not Applicable)

   2.8 Client Server
   2.7 Bar Coding
   4.8 Scanning
   3.2 CD-ROM
   2.8 CASE Tools
   1.7 Imaging
   3.1 Automated Storage
   3.8 4GL
   3.5 Older Languages
   2.8 Object Oriented
   2.6 Open Systems/UNIX
   3.4 Networks
   3.8 LAN's
   4.2 Stand Alone PCs
   3.8 Data Communication
   3.6 Voice Communication

5. Indicate the sizing trend of your EIP staff within the last two years?

33% Increasing
38% Stable
17% Downsizing

6. What is your department's EIP budget?

$93,191,510.00 Operating
$5,914,390.00 Capital

7. What percentage of your department's overall budget is allocated to technology?

15% Allocated to Technology

8. What percentage of your EIP budget goes to:

74% Personnel
8.5% Application to Software
17.5% Hardware, Systems Software

9. How much control does your department have over its own EIP budget?
(Scale: 5=Full Control, 1=No Control)

4 Amount of Control

10. Describe the direction of your EIP costs over the last 5 years?

44% Increased 13% Decreased
35% Stable

11. Do you have specific written EIP job classifications for each EIP position?

65% Yes 35% No

12. Do you have EIP job performance criteria for each EIP position?

52% Yes 48% No

13. Do you have specific written EIP job descriptions for each EIP position?

60% Yes 40% No

14. If "yes," to what degree do the job descriptions correspond to existing and future responsibilities and expertise required of those positions? (Scale: 5=Very Closely, 1=Not Closely)

4 Degree (Correspondence of job descriptions to responsibilities and expertise required)

15. Do you consider your current information systems staff qualified to satisfy your department's current and future needs? (Scale: 5=Very Qualified, 1=Not qualified)

3.6 Degree to which staff is qualified

16. What percentage of your department's EIP staff have:

72% of staff who have 100% of skills needed
75% of staff who have 75% of skills needed
38% of staff who have 50% of skills needed
41% of staff who have 25% of skills needed
0% of staff who have less than 25% of skills needed

17. Does your department receive formalized training for EIP Staff?

64% Yes 36% No

18. How many annual hours of training do EIP staff receive?

78% who receive 0 to 10 hours of training
77% who receive 11 to 40 hours of training
48% who receive 41 to 60 hours of training
65% who receive 61 to 80 hours of training
63% who receive 81+ hours of training

19. What percentage of training is provided by:

40% provided by ISD
15% provided by in-house staff
40% provided by vendor/seminars
0% provided by automated tutorial
0% provided by on-site library
5% provided by periodicals and magazines

20. Prior to starting a new project, is a cost/benefit analysis performed?

86% Yes 13% No

21. Are post-implementation reviews performed to ensure all benefits anticipated for a new project are realized?

58% Yes 42% No

22. Of the applications software and database maintenance support, what percentage is:

22% ISD
24% In-house (own department)
3% Contractor

23. Do you track hours spent on various projects by EIP staff?

43% Yes 57% No

24. What percentage of systems work is:

22% new development
44% enhancement
69% maintenance

25. To what extent does your department follow standard Quality Assurance guidelines? (Scale: 5= To a great extent, 1=Not al all)

3.3 Extent to which department follows standard Quality Assurance guidelines

26. Indicate the percentage of ISD projects that in the past three years have:

49% exceeded department's requirements
84% met department's requirements
48% failed

27. To what extend does ISD control the acquisition and development of your department's computing environments (e.g., LAN, PCS, etc.)? (Scale: 5=Full control, 1=No control)

1.7 degree of control by ISD

28. Please identify mechanisms that ISD uses to ensure consistency and compatibility among computer platforms (both those developed by ISD and those developed by your department)

17% None exist
29% Procurement process
35% Policies and procedures
44% Computer standards
44% Standardized networks/databases with which all applications must comply

29. What percentage of your departments's mainframe usage is being moved to other platforms?

25% 0% to 10%
8% 11% to 20%
42% Over 20%

30. Are services provided to your department by ISD charged back?

87.5% Yes
12.5% No

31. To what degree is your department satisfied with the amount charged back to your department by ISD? (Scale: 5=Very satisfied, 1=Not satisfied)

3.1 Degree to which department is satisfied with amounts charged back by ISD

32. Has ISD developed service level agreements or some other method by which your department can rate ISD's performance?

27% Yes 73% No

33. If "yes," how long have they been in use?

30% 6 months to one year
80% 3 years or longer

34. Is there an EIP strategic plan for your department?

72% Yes 28% No

35. If "yes," how effective is it? (Scale: 5=Actively used, 1=Never used/sits on shelf)

3.75 How effective?

36. How often are consultants used in each of the phases of an ISD effort that involves your department?

| | Never | 0-25% | 26-50% | Over 50% |
|---|---|---|---|---|
| Conceptualizing | 33% | 27% | 4% | 4% |
| Planning | 29% | 23% | 13% | 4% |

| | | | | |
|---|---|---|---|---|
| Implementing | 25% | 23% | 13% | 6% |
| Operating | 33% | 23% | 6% | 2% |

37. What types of services do contractors/consultants provide for your department?

25% Feasibility Study
35% Design
52% Development
46% Implementation
48% Systems integration
52% Software maintenance
56% Hardware maintenance
27% Telecommunications support
44% Staff training

38. Are there plans to outsource more information technology services to outside contractors?

15% Yes 52% No 33% Maybe

39. Does your department have access to electronic mail (e-mail)?

72% Yes 28% No

40. Does your department have access to the Internet?

64% Yes 36% No

*The following three questions were open-ended. For each question a selection of pertinent comments is provided:*

41. In what ways do you envision that electronic information processing services could be improved for the City and County of San Francisco? Be specific.

"Each department should identify which protocols they use. This information should be stored in a central location and available to all."

"City policy on interconnectivity. Departments which have a legitimate need to access data in other departments should be allowed to do so."

"ISD should have a business attitude and be able to operate as an independent consultant."

"More inter-departmental coordination. Establish and enforce citywide standards to ensure that systems are compatible and that computers can communicate with each other."

"Expand ISD Internet services."

"Consolidate functions of Controller's Office to include both ISD and EIPSC. Better communication within ISD and departments. Strategic plan needed for San Francisco."

"The entire city should be networked using one system."

"Evaluate and reconsider mission of EIPSC."

"PC on every desktop and access to e-mail."

"Expand EIP services to allow useful information to be made readily available to the public

via the Internet. Restructure mainframe applications programming from IDMS to relational database."

"More emphasis on executive education as it pertains to technology."

"Complete and implement the Human Resources reclassification study of EIP positions. ISD should complete and manage a citywide network (WAN). Evaluate and revamp the mission of EIPSC in light of decentralized networking solutions."

"Coordinate information technology projects citywide. Enable departments to have access to purchase orders online. Inform departments of available equipment being disposed."

"Departments need to be able to share information."

"Encourage and reward long term strategic thinking."

"More aggressive pursuit of migration mission critical systems to state of the art technology."

"ISD should expand their technical support staff in support of LAN operations and networking. This would enable ISD to provide more credible technology leadership."

"ISD should provide more information about what other departments are doing with technology to promote resource sharing."

"Provide citywide e-mail to all departments, not just those who can afford it."

"Adopt multi-year budgeting for large technology projects. Build a citywide wireless communication network."

"Funding should be made available to smaller departments to hire needed MIS staff and network administrators."

42. Should your department have more discretion in making decisions in order to serve the electronic information processing needs of the City and County of San Francisco more effectively? If yes, why? If no, why not? Be specific.

"Smaller departments need better representation on EIPSC."

"There needs to be a centralized data department which administers a master plan for the entire city."

"No. More discretion is likely to increase instances of incompatibility between departments."

"Mostly no. Some consistency of technology is needed and should be central. However, it makes sense to give departments discretion over their decisions."

"Yes. Smaller commissions do not need any more "Wang"-type, vendor-driven contracts."

"We need additional assistance in training to make the information we have available to the public."

"Yes, based on cost, standardization, and confidentiality."

"Departments should be left to manage their own affairs. However, a decision-making body, with veto authority, should be created to provide leadership."

"Departments need more discretion. However, there need to be tangible results from decisions already in place."

"Current and future technology will enable end-users to be more self-sufficient."

"EIPSC has not been able to prevent departments from purchasing any computer system they desired."

"Staff spend lots of time preparing plans and submitting figures that have no impact citywide, much less in our own department."

"For muti-departmental systems, ISD lacks the initiative and leadership to provide adequate project management."

"Smaller departments cannot support the overhead or time required for ISD participation."

43. Any further comments that you would like to bring to the attention of the Civil Grand Jury?

"EIPSC should have the power to force lagging departments to automate."

"The creation of a centralized data department would eliminate the need for EIPSC."

"ISD should focus on centralized operations and provide technical support for infrastructure services."

"The method of determining a department's pro rata share of the operations of the data center needs to be examined. Departments should be allowed the option of "pay as you go."

"This survey will show what we already know -- there is difficulty in this area. The real question is where to find funding to solve the problems."

"This questionnaire is a step in the right direction for reviewing ISD and EIPSC. Past grand

juries have displayed no knowledge or interest in information technology within the city."

"The fundamental system of beliefs must be changed to emphasize customer satisfaction."

"EIPSC should be disbanded. The repercussion would be less ineffective paperwork. It is ridiculous for us to seek EIPSC's approval for sole sourcing purchases."

"ISD should be helping departments become smarter consumers of technology."

"Smaller departments do not have the resources to hire MIS positions. Requests for new equipment, training, and consulting have proved very vulnerable in the recent budget process."

"Overall effectiveness of EIPSC is very questionable. There is no real planning cycle, just paperwork shuffling."

**APPENDIX B**

February 1996

## A COMPARATIVE STUDY OF INFORMATION TECHNOLOGY IN CALIFORNIA COUNTIES AND CITIES

Assisted by
Coro Foundation Fellows

To increase the 1995-96 Civil Grand Jury's understanding of the nature of local government application and organization of computer technology, a study was conducted of selected California counties and cities. The intention of this inquiry was to provide a comparative portrait of how other local governments structure their information technology services. The resultant data assisted the Civil Grand Jury in their deliberations pertaining to San Francisco's information technology framework.

Eight counties and five cities were selected based on their population equivalency to San Francisco City & County. Information was gathered through a telephone interview with each jurisdiction's executive personnel. The study collected the following information :

- Budget and expenditures
- Organization structures
- Financing methods
- Standardization procedures
- Future goals and directions

Whenever possible, supporting documentation from each jurisdiction was collected and analyzed. This report provides the following: summary of findings, profiles of the 11 local governments surveyed, and five concluding summary tables.

*Findings*

1. San Jose, Riverside County, Contra Costa County, Long Beach, and Santa Clara County exhibit greater departmental involvement in developing their strategic plans for information technology. In all of these local governments, executive decisions concerning technology are made through steering committees that set policy. However, departments are given wide latitude in making decisions, provided these decisions mesh with overall government standards.

2. The City of San Diego has created a non-profit information services entity. This model is an innovative design for entrepreneurial governance and for enhancing flexibility in technology-related decisions. Managed as an enterprise, the San Diego Data Processing Corporation is highly competitive, sovereign, and creative. This allows the city to be very adaptable to advances in technology, open to risk-taking, and less bureaucratic.

3. Sacramento County's bold vision provides a new conceptual framework for technological development in local government. Their emphasis is on what technology can do to improve work processes and department missions, rather than simply acquiring new technology to meet demand. This organizational design is a rational new model in this era when government needs to do more with fewer resources.

4. San Diego County's "Qualified Products List" is a novel technology procurement design. Computerland has the county contract for computer products and services. Departments can avoid the entire bureaucratic purchasing process and order directly from pre-approved vendors through the Computerland contract. This system reduces paperwork and encourages overall standardization in government.

**Contra Costa County**
Steve Steinbrenner, Chief Information Officer (CIO)
(510) 313-1200

IT Budget: $15 million
IT Staff: 82 FTE, 3 contractors

The CIO reports to the Chief Administrative Officer. The CIO's department is responsible for a centralized county mainframe, standard infrastructure, consulting and telecommunications. Information Technology Steering Committee (ITSC) makes executive decisions regarding information technology policy. The ITSC determines countywide business and technology standards. These standards are disseminated countywide. As long as departments follow these standards, their technology request will be approved. This provides departments great flexibility in choosing their software and hardware. Interdepartmental committees are formed by the CIO to coordinate a county response (e.g., LAN & WAN systems, Criminal Justice technology, technology in the year 2000) to new initiatives.

The county purchases only commercial software and does not allow custom design software to reduce county development costs. A standard countywide sole-source contract allows departments to purchase off an approved list without approval.

**Long Beach City**
Pat McGregor, Information Services Bureau (ISB)
(310) 570-6963

IT Budget: $20 million
IT Staff: 72 in ISB and 50 in Telecommunications

The city is working on its strategic plan. ISB is responsible for city computer operations, development, and new applications. The Telecommunications Bureau (established in November 1995) is responsible for data, voice, radio, cable TV, and microwave technologies. A Technology Steering Committee, comprised of all city department heads, establishes priority investments in technology infrastructure.

**Orange County**

Fred Voss, Information Systems Support & Data Services (ISS&DS)
(714) 834-6804

IT Budget: $20 million
IT Staff: 8 county FTE, 200 contract employees

Orange County has contracted out its entire information technology operations to Martin Marietta, with the exception of larger departments with their own MIS staff. Each department has its own technology plan, approved by the Board of Supervisors, which the contractor coordinates. Financing comes from a charge-back rate and from a General Fund account to which departments contribute based on their projected utilization.

**Riverside County**

Bobby Avery, Information Services Department (ISD)
(909) 275-3705

IT Budget: $18 million
IT Staff: 125 FTE

ISD works in conjunction with county departments to craft a strategic plan. Riverside is still very wedded to a mainframe environment, with marginal reliance on client server technology. ISD derives its financing from charge-back to departments. Because ISD depends on departmental

users for its budget, they are very keen on working closely with department heads. ISD brings together all department heads to discuss services, market conditions, and future direction. This is viewed as an opportunity to educate management to become better consumers of technology.

**Sacramento City**
Barbara Weaver, Information & Communications Services Department (ICSD)
(916) 264-5763

IT Budget: $8.5 million
IT Staff: 55 FTE

ICSD reports to the City Manager. They are still revising their strategic plan, scaling it back to meet City Council budget concerns. ICSD provides PC support for smaller city agencies. They contract out for data entry, specialized programming, and training. Contracting comprises 8% of ICSD work. Sacramento shares data systems with other cities in California, including public-private partnerships, when appropriate.

**Sacramento County**
Alan Rutieye, Central Information Services Deptment (CISD)
(916) 440-7210

IT Budget: $35.1 million
IT Staff: 175 FTE, 35 contractors

CISD contracts out for computer maintenance and specialized services. They have created a countywide strategic plan in close cooperation with all departments to forge an alliance among top management. All CISD operations are charged back; they receive no General Fund money. Previously, Sacramento County's strategic plan focused on technology acquisition (e.g., what kinds of equipment to purchase). Now, the revised plan focuses essentially on the nature of work

requirements resulting in a change of philosophy from procurement-driven to service-driven. Instead of system development and maintenance, the new focus will be on the arrangement and configuration of data storage, plus increased emphasis on customer satisfaction and workplace economies.

**San Diego City**

Ron Whittenberg, San Diego Data Processing Corporation (SD DPC)
(619) 581-9600

IT Budget: $50 million
IT Staff: 231 FTE

Sixteen years ago, the city outsourced its entire information technology operations, transferring the new entity to a 501c3 corporation status (non-profit). The charge of this new entity was to lessen the burden of government through technology. The Mayor appoints the Board of Directors. SD DPC handles the following operations: purchasing of equipment, maintenance of the city's mainframe and LANs, and Internet services. The non-profit status maintains local sovereignty while allowing great flexibility. Strong emphasis is on public-private partnerships (e.g., IBM, federal government, county government, etc.). San Diego pays an annual sum to SD DPC, and any savings at the end of the year are returned to the General Fund (estimated at $1 million per year). Software developed by the SD DPC is marketed and licensed to other area cities. Each city department develops its own strategic technology plan in accordance with citywide goals. Departments are required to collaborate to encourage interdepartmental compatibility and reduce redundancy.

**San Diego County**

Sandy Bernstein, Department Of Information Services (DIS)
(619) 531-5543

IT Budget: $18.7 million
IT Staff: 250 FTE

DIS reports directly to the Board of Supervisors. The County Business Automation Plan is revised every five years. Each county department produces its own plan which DIS incorporates into the countywide master technology business plan. Any department RFP involving automation must first get DIS approval before being submitted to the Board of Supervisors. Every county department is directly connected to the county mainframe. DIS established a countywide computer purchasing agreement with Computerland. A "Qualified Products List" allows departments to purchase equipment without approval directly from Computerland. This procurement contract guarantees a one-week turn around for products. To encourage standardization, departments that go outside the contract must wait 45 days for the usual county procurement process.

**San Jose City**
Gary Zouzoulas, Information Services Department (ISD)
(408) 277-4031

IT Budget: $5 million
IT Staff: 70 FTE

City departments are very dependent on ISD. ISD employees are stationed throughout city departments and rotated to ensure cross-training in citywide automation. ISD is financed directly from the city General Fund -- no charge-back system. Departments pay a pro rata share for their use of the city's mainframe. ISD provides network management for small departments at no cost.

**San Mateo County**
John Poe, Information Services Department (ISD)
(415) 363-4590

IT Budget: $21 million
IT Staff: 106 FTE

ISD reports directly to the Board of Supervisors. All county MIS staff are employees of ISD and stationed in departments. Departments pay set monthly charges to ISD for various services (e.g., voicemail, e-mail, Internet access, etc.). The countywide strategic plan encourages an "Open Systems" standard. County is in the process of contracting with local cities to join ISD to share in the advantages of countywide purchasing power. San Mateo County has basic e-mail for all county employees. The county uses e-mail to send messages and documents. ISD is working on developing a centralized data warehouse enabling departments to send, receive and share information across the countywide network.

**Santa Clara County**
Gary Aslanian, Data Processing Center (DPC)
(408) 299-3611

IT Budget: $16.1 million
IT Staff: 150 FTE

DPC maintains the countywide mainframe system while each major department has its own mini-mainframe networked to the main county system. DPC assists departments to develop their own strategic plans that encompass both computers and telecommunications. Three high level policy and planning committees chaired by members of the Board of Supervisors and/or the County Executive set direction. Departments set their strategic planning within countywide goals and must submit cost/benefit analyses for funding approval of new technology as part of the annual budget process. As part of this analysis, the requestor must describe intended county savings from the automation, as well as benefits for the department and the public. DPC reviews the post-implementation of new automation projects to ascertain fulfillment of the department's goals and benefits. Santa Clara County is pursuing an "Open Systems" environment to ensure

interdepartmental communication regardless of equipment acquired. DPC limits its outside contracting work to maintenance (about 4% of total budget) leaving development to county staff to ensure the retention of in-house expertise and as a professional development avenue. DPC is consolidating departmental data processing centers among affinity departments to encourage inter-departmental cooperation, sharing of MIS expertise, and to reduce county costs.

## SUMMARY TABLES

| Counties by Size | Population (in 1993) | Cities by Size | Population (in 1993) |
|---|---|---|---|
| San Diego | 2,648,6000 | San Diego | 1,171,600 |
| Orange | 2,557,300 | San Jose | 822,000 |
| Santa Clara | 1,563,800 | San Francisco | 752,000 |
| Riverside | 1,328,300 | Long Beach | 437,800 |
| Sacramento | 1,121,200 | Sacramento | 391,100 |
| Contra Costa | 855,100 | | |
| San Francisco | 752,000 | | |
| San Mateo | @ 700,000 | | |

| BUDGET (in dollars) | ISD or EQUIVALENT BODY | ADDITIONAL EXPENDITURES |
|---|---|---|
| COUNTIES (in order of size) | | |
| San Diego | 18.65 million | |
| Orange | 20 million | |
| Santa Clara | 16.1 million | |
| Riverside | 12 million | 6 million + |
| Sacramento | 28.1 million | @ 7 million |
| Contra Costa | 8.5 million | @ 6.5 million |
| San Francisco | 20 million | |
| San Mateo | 15 million | @ 6 million |

| BUDGET (in dollars) | ISD or EQUIVALENT BODY | ADDITIONAL EXPENDITURES |
|---|---|---|
| CITIES (in order of size) | | |
| San Diego | 50 million (NGO) | |
| San Jose | 4 million | @ 1 million |
| San Francisco | 20 million | |
| Long Beach | 20 million | |
| Sacramento | 5.5 million | @ 3 million |

| Full Time Employees | ISD or Equivalent Body | In Other Departments | Contracted Employees |
|---|---|---|---|
| COUNTIES | | | |
| San Diego | 250 FTEs | some LAN administrators | |
| Orange County | 8 FTEs | | 200 from private firm |
| Santa Clara County | 150 FTEs | each dept. has own staff | |
| Riverside County | 125 FTEs | | |
| Sacramento County | 175 FTEs | | 30 FTEs |
| Contra Costa County | 82 FTEs | yes, e.g., DPH: 30 FTEs | 3 FTEs |
| San Francisco | 202 FTEs | | 18 FTEs |
| San Mateo County | 106 FTEs | at least 2 per dept. | |
| | | | |
| CITIES | | | |
| San Diego | | | 231 FTEs (from non-profit ISD organization) |
| San Jose | 55 FTEs | @ 12 | |
| San Francisco | 202 FTEs | | 18 FTEs |
| Long Beach | 72 FTEs | 50 in Telecommunications Bureau (New department) | |
| Sacramento | 55 FTEs | yes, paid by each dept. | |

| Rate for Services (in dollars) | Consulting | Programming | Other |
|---|---|---|---|
| COUNTIES | | | |
| San Diego | $50.89/hr | | |
| Orange | | | Charge-back and cost pool system based on hours spent |
| Santa Clara | $54.47/hr | | |
| Riverside | $44.72/hr | | |
| Sacramento | | | 100% chargeable: ISD receives no money from general fund |
| Contra Costa | $55.00/hr | $45.00/hr | |
| San Francisco | $50.00/hr | | |
| San Mateo | $63.00/hr | | |
| | | | |
| CITIES | | | |
| San Diego | | | NGO budget determined by each department's projected expenditures for the year |
| San Jose | | | No charge-back or billing; departments contribute for share of citywide services |
| San Francisco | $50.00/hr | | |
| Long Beach | | $80.00/hr | |
| Sacramento | | | Cost allocation plan based on expenditures from previous year |

| | Percentage of ISD Work Contracted Out |
|---|---|
| COUNTIES | |
| San Diego | 5% |
| Orange | Over 95% |
| Santa Clara | 2-4% |
| Riverside | Less than 5% |
| Sacramento | Contract out for service-type work (maintenance) |
| Contra Costa | No response |
| San Francisco | @ 10% (for applications development) |
| San Mateo | 13% |
| | |
| CITIES | |
| San Diego | 100% to NGO |
| San Jose | 20% |
| San Francisco | |
| Long Beach | 0% |
| Sacramento | 8% |